

# NOTiCiAS DEL OSO

April 14, 2010

#14

It's almost TAKS time! Which, yes, is stressful to think of, but that means we're all that much closer to finishing the year! Huzzah!

I've had a request for some last minute strategies to help our English Language Learners in the subjects of math and science, which are not my expertise. Luckily for us, however, I do have a friend who is head of the Newcomer Program in Garland and has graciously allowed me to dig through piles of ESL materials on the subjects.

Hopefully the pearls that I've included in this

**\*Super-Deluxe-Happy-Fun-Time-Math-Science Extravaganza\*** issue will help us make some things click for those kiddos.

*Erin VanSickle*

## SLABs: SECRET LANGUAGE BARRIERS

Okay, so perhaps these are more "language barriers that we hadn't realized existed because we didn't consider them fully" than "secret" language barriers, but that's not a very good title. Below are some language barriers that sometimes hang out below teachers' radars that could be a quick fix for some of the students who are having issues with the numerical problems and processes.

~ **Money is not universal.** If it's not bad enough that our LEP students have to struggle to read the word problems in the first place, it gets even harder for them when money is involved. Students who use another currency will more than likely second guess themselves, and it gets even worse for our Economically Disadvantaged students who don't have enough practice using US cash. Consider reviewing this with some manipulatives for a fun activity, even if it seems elementary.

~ **Comma vs. Period** Many countries (including most Central and South American countries) use a comma to designate a decimal point and a period where we usually place a comma to designate larger numbers. If this confuses me when I'm looking at prices on travel websites, I'm sure it confuses students from other countries when they look at probability or ratio problems. Even multiplication, division, and measurements can get confusing if you're accustomed to a decimal point being represented by a comma.

~ **Metric Schmetric** Students who learned some of their math skills (especially recently) in another country may struggle with problems that involve measurements because they learned to do word problems with the metric system. It's the price that we pay for being unique with our measurement system. Even students who occasionally travel to visit family in other countries may benefit from additional review.

~ **Father doesn't always know best.** Yes, there are some students that you may believe these problems don't apply to because they've been in US public schools all their lives. However, if those students are going home and asking their parents for help, their parents may have the issues that I listed above that they apply to aid their children. As I'm sure you know, well-meant instruction from a parent can harm more than help sometimes, unfortunately. Go ahead and review the basics with those kiddos just in case.

# MATH STRATEGIES

Obviously, we know the traditional suggestions. These include:

- Use and model manipulatives
- Whenever possible connect mathematical concepts to real life situations.
- Model alternative ways to solve the problem.
- Allow extra time and reduce the amount of work to discourage frustration
- Give them the option of using the bilingual glossary if needed - and useful!

However, there are a few lesser-known, or at least lesser-utilized strategies that I found in the tomes of ESL textbooks. The most beneficial ones I found were:

- **CREATE A "CHEAT SHEET"** Make a list of vocabulary terms and multiple meaning words that students may encounter for each type of problem. (Example: For a division problem, you may see the words:....For an addition problem, the test may use the words...)I actually know that at least one math teacher at Berry currently uses this for her classes, and I think that's a great idea. It's an accommodation that could be useful to the whole class.

- **ECHO-ING** Rather than asking if a student understands an instruction or problem, ask the student to repeat the explanation or instructions back to you. If it sounds like "parroting," ask more in-depth questions to see if they truly understand it. If they have trouble explaining, stop them, go over it again in simpler language and then ask them to explain it back to you.

- **PAIR ELL STUDENTS WITH A NATIVE-ENGLISH SPEAKER FOR REVIEW.** Yes, when doing assignments it is often a good idea - and sometimes necessary - to pair ELL students together. However, when we are reviewing work that was already done, pair the students with a native English speaker to help them hear rationale from a student perspective. Often a student may explain how or why the problem is solved in a certain way with a simpler vocabulary than a teacher might, which will help the ELL not only understand but also connect the simple vocabulary from the peer to the more complex language used by the teacher.

- **USE READING STRATEGIES!** Your excellent language arts team teachers have been training our students in the appropriate way to read and analyze passages on our TAKS test. You can, of course, utilize this to your advantage as well. Have students identify and highlight the key words and language necessary to solve the problem. When an ELL is not a strong reader, too many words may confuse them.

**\*\*Special Note\*\*** When you are preparing your accommodations for your double-dippers, please remember that one of an ELL's biggest weaknesses is an overload of information. They will more than likely perform better with the supplemental aids if you review them and eliminate the ones they do not prefer to use beforehand.

# SCIENCE STRATEGIES

Some of the strategies for math and science are similar, and you may see a couple of repeats in the suggestions below. Many of the commonly-used accommodations are the same, as seen below:

- Use and model manipulatives
- Use real-life examples and scenarios for the scientific theory explanations
- Make the Bilingual Glossary available
- Allow extra time and reduce the amount of work to discourage frustration

Additional strategies that I unearthed amongst the obvious included:

- **PUT VOCABULARY UP FRONT** One way to make sure that all of our students, whether they are LEP students or not, understand all of the key vocabulary and terms for the day's lesson is to stick all of the applicable words on the board at the start of the day. Then, treat them like you treat your objective. Go over them at the beginning, define them, add a clue next to them on the board (preferably a visual clue), and then review at the end of the lesson. This advice also satisfies the next bit of advice.
- **REPETITION, REPETITION, REPETITION** For any new concept, it's good to repeat the work for all students. But with our ELL students, there's so much for them to take in when you combine the casual English language with the academic vocabulary on top of the true process and gist of the lesson that it's absolutely essential that they get the chance to practice the skills. Then practice some more. And some more with new concrete, real-world examples. And it would be great if they could have it explained that magic 3 times. Of course, it takes many more repetitions to ingrain the process, but you get the idea.
- **CROSS CULTURES** Our everyday examples may involve portions of life that we take for granted as "common" to the US environment. However, because many of our LEP students come from different backgrounds, their experiences may not be as "common" as some other students'. Whenever possible, use examples that you know for certain they have been exposed to, such as any activity at school.
- **PREPARE FLASHCARDS.** Most LEP students are, by necessity, heavily visual learners. By using flashcards for multiple reviews (vocab definitions, equipment identifications, problem key words, etc.) you're tapping into their most comfortable learning zone. Also, as many of our ELLs struggle with academic self-confidence, knowing that the answer is just on the other side of the card makes it feel more attainable and less stressful for them.
- **USE READING STRATEGIES!** Your excellent language arts team teachers have been training our students in the appropriate way to read and analyze passages on our TAKS test. You can, of course, utilize this to your advantage as well. Have students identify and highlight the key words and language necessary to solve the problem. When an ELL is not a strong reader, too many words may confuse them.